This listing of claims will replace all prior versions, and listings, of claims in the application:

## **Amendments to the Claims:**

1. (Currently Amended) A compound of the following formula (I)

$$R^{1}$$
 $(CH_{2})n$ 
 $R^{5}$ 
 $R^{4}$ 

(I)

or a pharmaceutically acceptable ester of such a compound, or a pharmaceutically acceptable salt and solvates thereof, wherein

- R<sup>1</sup> and R<sup>2</sup> independently represent a hydrogen atom, a halogen atom or an alkyl group having from 1 to 3 carbon atoms;
- R³ represents a hydrogen atom, a cycloalkyl group having from 3 to 6 carbon atoms, a tetrahydrofuranyl group, a tetrahydropyranyl group, or an alkyl group having from 1 to 6 carbon atoms, which alkyl group is optionally substituted by 1 to 3 groups selected from a cyano group, a halogen atom, a hydroxy group, an alkoxy group having from 1 to 3 carbon atoms, an oxo group, an amino group and a mono- or di- alkylamino group having from 1 to 3 carbon atoms;

R<sup>4</sup> represents a hydrogen atom or an alkyl group having from 1 to 3 carbon atoms; or



represents one of the following

$$N \supset N \supset N \longrightarrow N \longrightarrow NR^6$$

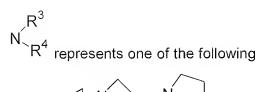
optionally substituted by 1 to 2 groups selected from an oxo group, a hydroxy group, a hydroxyalkyl group having from 1 to 3 carbon atoms, an alkoxy group having from 1 to 3 carbon atoms, an alkyl group having from 1 to 6 carbon atoms or an alkoxyalkyl group ahving a total of from 2 to 6 carbon atoms;

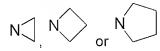
- R<sup>5</sup> represents an aryl group having from 6 to 10 ring atoms or a heteroaryl group and said heteroaryl group is a 5- to 10-membered hetero aromatic group containing from 1 to 3 hetero atoms selected from a oxygen atom, a sulfur atom and a nitrogen atom; said aryl group and heteroaryl group are optionally substituted by 1 to 3 groups selected from a halogen atom, a hydroxy group, an alkyl group having from 1 to 3 carbon atoms, an alkoxy group having from 1 to 3 carbon atoms, an alkyl group having from 1 to 6 carbon atoms interrupted by an oxgen atom, a hydroxyalkyl group having from 1 to 3 carbon atoms, an amino group, a mono-or di-alkylamino group having from 1 to 3 carbon atoms, an aminocarbonyl group, a mono- or di- alkylaminocarbonyl group having from 1 to 3 carbon atoms in each alkyl group, an alkanovlamino group having from 1 to 3 carbon atoms and an alkylsulfonylamino group having from 1 to 3 carbon atoms;
- R<sup>6</sup> represents a hydrogen atom, an alkyl group having from 1 to 3 carbon atoms, an alkanoyl group having from 1 to 3 carbon atoms or an alkylsulfonyl group having from 1 to 3 carbon atoms;
- -X-Y- represents a group of the formula  $-N(R^7)C(=0)$ -,  $-C(=0)N(R^7)$ -,  $-N(R^7)CH_2$ -,  $-CH_2N(R^7)$ -. -N(R<sup>7</sup>)SO<sub>2</sub>-, -SO<sub>2</sub>N(R<sup>7</sup>)-, -CH<sub>2</sub>CH<sub>2</sub>-, -CH=CH-, -CH(CH<sub>2</sub>OH)CH<sub>2</sub>-, -CH<sub>2</sub>CH(CH<sub>2</sub>OH)-,- $CH_2CH(OH)_{-1}$ ,  $-CH(OH)CH_{2-1}$ ,  $-C(R^7)(R^8)_{-1}$ -O- or  $-O-C(R^7)(R^8)_{-1}$ R<sup>7</sup> represents a hydrogen atom or an alkyl group having from 1 to 3 carbon atoms; R<sup>8</sup> represents a hydrogen atom, an alkyl group having from 1 to 3 carbon atoms or a hydroxyalkyl group having from 1 to 3 carbon atoms;

n represents an integer 0, 1 or 2

- 2. (Original) A compound according to Claim 1, wherein R<sup>1</sup> and R<sup>2</sup> independently represent a hydrogen atom or a fluorine atom.
- 3. (Currently Amended) A compound according to Claim 1 or Claim 2 wherein, R<sup>3</sup> represents a hydrogen atom, a tetrahydrofuranyl group, an alkyl group having from 1 to 6 carbon atoms optionally substituted by 1 to 3 groups selected from a cyano group, a halogen atom, a hydroxy group, an alkoxy group having from 1 to 3 carbon atoms, an oxo group and a di- alkylamino group having from 1 to 3 carbon atoms; and

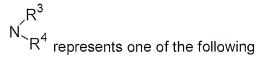
R<sup>4</sup> represents a hydrogen atom or an alkyl group having from 1 to 3 carbon atoms; or

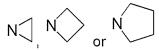




optionally substituted by 1 to 2 groups selected from a hydroxy group, a hydroxyalkyl group having from 1 to 3 carbon atoms, an alkoxy group having from 1 to 3 carbon atoms, an alkyl group having from 1 to 3 carbon atoms or an alkoxyalkyl group ahving a total of from 2 or 3 carbon atoms.

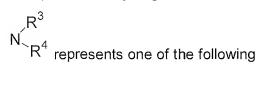
5.4. (Currently Amended) A compound according to-any-one-of claims 1-to-3,  $R^3$  represents a hydrogen atom, a tetrahydrofuranyl group, an alkyl group having from 1 to 6 carbon atoms optionally substituted by 1 substituent selected from a cyano group, a trifluoromethyl group, a hydroxy group, a methoxy group, an oxo group and a dimethylamino group; and  $R^4$  represents a hydrogen atom or a methyl group; or





optionally substituted by 1 to 2 groups selected from a hydroxy group, a hydroxymethyl group, a methoxy group, a methyl group and a methoxymethyl group.

5. (Currently Amended) A compound according to any one of claims 1 to 4 wherein R³ represents a hydrogen atom, a tetrahydrofuranyl group, a methyl group, an hydroxyethyl group, a methoxybutyl group, a hydroxybutyl group, a methoxyethyl group, a hydroxypentyl group, a cyano methyl group, a cyanomethyl group, a dimethylaminobutyl group, a trifluoroethyl group or a dimethylaminoethyl group; and R⁴ represents a hydrogen atom or a methyl group; or



- 6. (Currently Amended) A compound according to any one of claims 1 to 5-wherein R<sup>5</sup> represents a phenyl group or a heteroaryl group and said heteroaryl group is a 5- to 6-membered hetero aromatic group containing from 1 to 2 nitrogen heteroatoms or 1 or 2 nitrogen heteroatoms and 1 oxygen or 1 sulfur atom; said phenyl group and heteroaryl group are optionally substituted by 1 to 3 groups selected from a halogen atom, a hydroxyl group, an alkyl group having from 1 to 3 carbon atoms, an alkyl group having from 1 to 6 carbon atoms interrupted by an oxgen atom, a hydroxyalkyl group having from 1 to 3 carbon atoms, an amino group and an alkylsulfonylamino group having from 1 to 3 carbon atoms.
- 7. (Currently Amended) A compound according to any one of claims 1 to 6-wherein R<sup>5</sup> represents a phenyl group or a heteroaryl group selected from a pyridyl group, a thiazolyl group, a pyrazolyl group and an oxazolyl group; said phenyl group is optionally substituted by 1 to 3 groups selected from a fluorine atom, a chlorine atom, a hydroxy group, a methyl group, a methoxymethyl group, a hydroxymethyl group, an amino group and methanesulfonylamino.
- 8. (Currently Amended) A compound according to any one of claims 1 to 7, wherein -X-Y- represents a group of the formula  $-N(CH_3)C(=O)$ -,  $-N(CH_3)CH_2$ -,  $-N(CH_3)SO_2$ -,  $-CH_2O$ -,  $-CH(CH_3)O$ -,  $-CH(CH_3)O$ -,  $-CH(CH_2OH)O$ -,  $-CH_2CH_2$ -,  $-CH(CH_2OH)CH_2$ -,  $-CH(OH)CH_2$ -,  $-CH(OH)CH_2$ -,  $-CH(OH)CH_2$ -, -CH(OH)-.

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- 9. (Original) A compound according to any one of claims 1 to 8, wherein -X-Y- represents a group of the formula  $-N(CH_3)C(=O)$ -,  $-CH_2O$ -,  $-CH(CH_3)O$ -,  $C(CH_3)_2O$  or  $-CH_2CH_2$ -.
- 10. (Currently Amended) A compound according to any one of claims 1 to 9 wherein n represents an integer 0.
- 11. (Currently Amended) A compound according to Claim 1 selected from:
- 3-(2,3-Dihydro-1'H-spiro[indene-1,4'-piperidin]-1'-yl)-N,N-dimethyl-2-(pyridin-2-ylmethyl)propanamide;
- *N*,*N*-Dimethyl-3-(1'*H*,3*H*-spiro[2-benzofuran-1,4'-piperidin]-1'-yl)-2-(1,3-thiazol-4-ylmethyl)propanamide;
- 3-(6-Fluoro-1'*H*,3*H*-spiro[2-benzofuran-1,4'-piperidin]-1'-yl)-*N*,*N*-dimethyl-2-(pyridin-2-ylmethyl)propanamide ;
- (-)-3-(6-Fluoro-1'*H*,3*H*-spiro[2-benzofuran-1,4'-piperidin]-1'-yl)-*N*,*N*-dimethyl-2-(pyridin-2-ylmethyl)propanamide ;
- 3-(6-Fluoro-1'*H*,3*H*-spiro[2-benzofuran-1,4'-piperidin]-1'-yl)-*N*-(2-hydroxyethyl)-*N*-methyl-2-(pyridin-2-ylmethyl)propanamide;
- 3-(6-Fluoro-1'H,3H-spiro[2-benzofuran-1,4'-piperidin]-1'-yl)-N-(2-methoxyethyl)-N-methyl-2-(pyridin-2-ylmethyl)propanamide;
- 3-(6-Fluoro-1'*H*,3*H*-spiro[2-benzofuran-1,4'-piperidin]-1'-yl)-*N*,*N*-dimethyl-2-(1,3-thiazol-4-ylmethyl)propanamide ;
- (-)-3-(6-Fluoro-1'*H*,3*H*-spiro[2-benzofuran-1,4'-piperidin]-1'-yl)-*N*,*N*-dimethyl-2-(1,3-thiazol-4-ylmethyl)propanamide ;
- 3-(6-Fluoro-1'*H*,3*H*-spiro[2-benzofuran-1,4'-piperidin]-1'-yl)-*N*-(2-methoxyethyl)-*N*-methyl-2-(1,3-thiazol-4-ylmethyl)propanamide;
- 3-(5-Fluoro-1-methyl-2-oxo-1,2-dihydro-1'*H*-spiro[indole-3,4'-piperidin]-1'-yl)-*N*,*N*-dimethyl-2-(pyridin-2-ylmethyl)propanamide;
- 3-(3,3-Dimethyl-1'*H*,3*H*-spiro[2-benzofuran-1,4'-piperidin]-1'-yl)-*N*,*N*-dimethyl-2-(pyridin-2-ylmethyl)propanamide ;
- 1-[3-(6-Fluoro-1'*H*,3*H*-spiro[2-benzofuran-1,4'-piperidin]-1'-yl)-2-(1,3-thiazol-4-ylmethyl)propanoyl]-3-methylazetidin-3-ol;

- *N*,*N*-Dimethyl-3-(3-methyl-1'*H*,3*H*-spiro[2-benzofuran-1,4'-piperidin]-1'-yl)-2-(pyridin-2-ylmethyl)propanamide;
- 3-(6-Fluoro-1'*H*,3*H*-spiro[2-benzofuran-1,4'-piperidin]-1'-yl)-*N*,*N*-dimethyl-2-(1*H*-pyrazol-1-ylmethyl)propanamide ;
- (-)-3-(6-Fluoro-1'*H*,3*H*-spiro[2-benzofuran-1,4'-piperidin]-1'-yl)-*N*,*N*-dimethyl-2-(1*H*-pyrazol-1-ylmethyl)propanamide ;
- 3-(6-Fluoro-1'*H*,3*H*-spiro[2-benzofuran-1,4'-piperidin]-1'-yl)-*N*-(2-hydroxyethyl)-*N*-methyl-2-(1,3-thiazol-4-ylmethyl)propanamide;
- (-)-3-(6-Fluoro-1'H,3H-spiro[2-benzofuran-1,4'-piperidin]-1'-yl)-N-(2-hydroxyethyl)-N-methyl-2-(1,3-thiazol-4-ylmethyl)propanamide ;
- 3-(6-Fluoro-1'H,3H-spiro[2-benzofuran-1,4'-piperidin]-1'-yl)-N-(2-methoxy-2-methylpropyl)-N-methyl-2-(1,3-thiazol-4-ylmethyl)propanamide;
- 1-[3-(6-Fluoro-1'*H*,3*H*-spiro[2-benzofuran-1,4'-piperidin]-1'-yl)-2-(1,3-thiazol-4-ylmethyl)propanoyl]-3-methylpyrrolidin-3-ol;
- 3-(6-Fluoro-1'*H*,3*H*-spiro[2-benzofuran-1,4'-piperidin]-1'-yl)-*N*-(3-hydroxy-3-methylbutyl)-*N*-methyl-2-(1,3-thiazol-4-ylmethyl)propanamide ;
- 3-(6-Fluoro-1'*H*,3*H*-spiro[2-benzofuran-1,4'-piperidin]-1'-yl)-*N*-methyl-*N*-(tetrahydrofuran-3-yl)-2-(1,3-thiazol-4-ylmethyl)propanamide;
- *N*,*N*-Dimethyl-3-(3-methyl-1'*H*,3*H*-spiro[2-benzofuran-1,4'-piperidin]-1'-yl)-2-(1,3-thiazol-4-ylmethyl)propanamide ;
- 1'-[3-Azetidin-1-yl-3-oxo-2-(1,3-thiazol-4-ylmethyl)propyl]-6-fluoro-3*H*-spiro[2-benzofuran-1,4'-piperidine];
- 3-(6-Fluoro-1'*H*,3*H*-spiro[2-benzofuran-1,4'-piperidin]-1'-yl)-*N*,*N*-dimethyl-2-[(4-methyl-1*H*-pyrazol-1-yl)methyl]propanamide;
- 3-(4-Chloro-1*H*-pyrazol-1-yl)-2-[(6-fluoro-1'*H*,3*H*-spiro[2-benzofuran-1,4'-piperidin]-1'-yl)methyl]-*N*,*N*-dimethylpropanamide;
- (-)-3-(4-Chloro-1*H*-pyrazol-1-yl)-2-[(6-fluoro-1'*H*,3*H*-spiro[2-benzofuran-1,4'-piperidin]-1'-yl)methyl]-*N*,*N*-dimethylpropanamide;
- 3-(6-Fluoro-3,4-dihydro-1'*H*-spiro[isochromene-1,4'-piperidin]-1'-yl)-*N*,*N*-dimethyl-2-(1*H*-pyrazol-1-ylmethyl)propanamide;
- 3-(6-Fluoro-3,4-dihydro-1'*H*-spiro[isochromene-1,4'-piperidin]-1'-yl)-*N*,*N*-dimethyl-2-(1,3-thiazol-4-ylmethyl)propanamide;

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or a pharmaceutically acceptable ester thereof.
or a pharmaceutically acceptable salt thereof.

- 12. (Currently Amended) A pharmaceutical composition including a compound of the formula (I) or a pharmaceutically acceptable ester-or-salt thereof, as defined in any one of claims 1 to 11, together with a pharmaceutically acceptable excipient.
- 13. (Canceled)
- 14. (Canceled)
- 15. (Canceled)
- 16. (Currently Amended) A method of treatment of a mammal, including a human being, to treat a disease for which an ORL1 antagonist is indicated, including treating said mammal with an effective amount of a compound of the formula (I) or with a pharmaceutically acceptable salt, solvate or composition thereof, as defined in any one of claims 1 to 10 and 11, respectively.
- 17. (Original) A method according to claim 16 where the disease is selected from pain; sleep disorders, eating disorders including anorexia and bulimia; anxiety and stress conditions; immune system diseases; locomotor disorder;; memory loss, cognitive disorders and dementia including senile dementia, Alzheimer's disease, Parkinson's disease or other neurodegenerative pathologies; epilepsy or convulsion and symptoms associated therewith; a central nervous system disorder related to gulutamate release action, anti-epileotic action, disruption of spatial memory, serotonin release, anxiolytic action, mesolimbic dopaminergic transmission, rewarding propaerties of drug of abuse, modulation of striatal and glutamate effects on locomotor activity; cardiovascular disorders including hypotension, bradycardia and stroke; renal disorders including water excretion, sodium ion excretion and syndrome of inappropriate secretion of antidiuretic hormone (SIADH); gastrointestinal disoders; airway disorders including adult respiratory distress syndrome (ARDS); autonomic disorders including suppression of micturition reflex; metabolic disorders including obesity; cirrhosis with ascites;

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sexual dysfunctions; altered pulmonary function including obstructive pulmonary disease; and tolerance to or dependency on a narcotic analgesic.

18. (Currently Amended) A method according to claim <del>16 or claim</del> 17 where the disease <u>is</u> pain, sleep disorders, eating disorders including anorexia and bulimia; stress conditions; memory loss, cognitive disorders, gastrointestinal disoders; sexual dysfunctions; tolerance to or dependency on a narcotic analgesic.